

IN THE CLAIMS:

1-10. (Canceled)

11. (Previously presented) An isolated and purified soybean nucleic acid molecule encoding a biologically active SCN/SDS resistance polypeptide.

12. (Canceled)

13. (Previously presented) The nucleic acid molecule of claim 11, further comprising an isolated soybean *rhg1* and SDS resistance nucleic acid, said nucleic acid capable of conveying *Heterodera glycines*-infestation resistance, *Fusarium solani*-infection resistance, or both *Heterodera glycines*-infestation resistance and *Fusarium solani*-infection resistance to a non-resistant soybean germplasm, said nucleic acid located within a quantitative trait locus mapping to linkage group G and mapped by genetic markers of SEQ ID NOs:1-6, said nucleic acid located along said quantitative trait locus between said markers.

14. (Currently amended) The nucleic acid molecule of claim 11, further defined as a nucleic acid molecule selected from the group consisting of:

- (a) a nucleic acid molecule comprising the nucleotide sequence of SEQ ID NO:13;
- (b) a nucleic acid molecule comprising a nucleotide sequence that is ~~substantially identical~~ at least 90% identical to SEQ ID NO:13; and
- (c) a single stranded nucleic acid molecule that hybridizes to a nucleic acid molecule comprising the reverse complement of the nucleotide sequence set forth in SEQ ID NO:13 under wash stringency conditions represented by a wash solution having about 200 mM salt concentration and a wash temperature of at least about 45°C, and that encodes an SCN/SDS resistance polypeptide.

15. (Previously presented) The nucleic acid molecule of claim 14, further defined as comprising a 20 base pair nucleotide sequence that is identical to a contiguous 20 base pair nucleotide sequence of nucleotides 1-1830 of SEQ ID NO:13.

16. (Canceled)

17. (Original) The nucleic acid molecule of claim 11, further defined as a DNA segment.

18. (Previously presented) The nucleic acid molecule of claim 11, wherein the nucleic acid molecule is operatively linked to a promoter.

19. (Previously presented) The nucleic acid molecule of claim 18, wherein said nucleic acid molecule and promoter are operationally inserted into a recombinant vector.

20. (Original) A recombinant host cell comprising the nucleic acid molecule of claim 11.

21. (Original) A transgenic plant having incorporated into its genome a nucleic acid molecule of claim 11, the nucleic acid molecule being present in said genome in a copy number effective to confer expression in the plant of an SCN/SDS resistance polypeptide.

22. (Currently amended) A Plant seed[[s]], part[[s]], or progeny of a transgenic plant as claimed in claim [[20]] 21.

23. (Previously presented) The nucleic acid molecule of claim 11, further comprising an isolated soybean *Rhg4* nucleic acid, said nucleic acid capable of conveying *Heterodera glycines*-infestation resistance to a non-resistant soybean germplasm, said nucleic acid located within a quantitative trait locus mapping to linkage group A2 and mapped by the AFLP markers of SEQ ID NOs:7-12, said nucleic acid located along said quantitative trait locus between said markers.

24. (Currently amended) The nucleic acid molecule of claim 23, further comprising:

- (a) the nucleotide sequence of any one of SEQ ID NOs:16-19;
- (b) a nucleotide sequence ~~substantially identical~~ at least 90% identical to any one of SEQ ID NOs:16-19; or
- (c) a nucleotide sequence that hybridizes to one of SEQ ID NOs: 16-19 under wash stringency conditions represented by a wash solution having about 200 mM salt concentration and a wash temperature of at least about 45°C, and that encodes an SCN/SDS resistance polypeptide.

25. (Currently amended) A transgenic plant comprising an isolated soybean *Rhg4* nucleic acid comprising a nucleic acid sequence selected from the group consisting of:

- (a) the nucleotide sequence of any one of SEQ ID NOs:16-19;
- (b) a nucleotide sequence ~~substantially identical~~ at least 90% identical to any one of SEQ ID NOs:16-19; or
- (c) a nucleotide sequence that hybridizes to one of SEQ ID NOs: 16-19 under wash stringency conditions represented by a wash solution having about 200 mM salt concentration and a wash temperature of at least about 45°C, and that encodes an SCN/SDS resistance polypeptide.

26. (Currently amended) A seed ~~Seeds, part[[s]],~~ or progeny of the transgenic plant of claim 25, wherein the seed[[s]], part[[s]], or progeny comprises the isolated soybean *Rhg4* nucleic acid.

27-70. (Canceled)

71. (Previously presented) A method for providing a resistance trait to a plant, the method comprising introducing into said plant a construct comprising a nucleic acid molecule comprising a nucleic acid sequence encoding a soybean SCN/SDS resistance gene product operatively linked to a promoter, wherein production of the SCN/SDS resistance gene product in the plant provides SCN or SDS resistance trait to the plant.

72. (Previously presented) The method of claim 71, wherein the construct further comprises a vector selected from the group consisting of a plasmid vector and a viral vector.

73. (Previously presented) The method of claim 71, wherein the SCN/SDS resistance gene product comprises a protein having an amino acid sequence of amino acids 1-610 of SEQ ID NO:14.

74. (Currently amended) The method of claim 71, wherein the nucleic acid sequence is selected from the group consisting of:

- (a) a nucleotide sequence set forth as nucleotides 1-1830 of SEQ ID NO:13;

- (b) a nucleotide sequence ~~substantially identical~~ at least 90% identical to nucleotides 1-1830 of SEQ ID NO:13; and
- (c) a nucleotide sequence that hybridizes to nucleotides 1-1830 of SEQ ID NO:13 under wash stringency conditions represented by a wash solution having about 200 mM salt concentration and a wash temperature of at least about 45°C, and that encodes an SCN/SDS resistance polypeptide.

75. (Previously presented) The method of claim 71, wherein the resistance trait is nematode resistance, fungal resistance or combinations thereof.

76. (Original) The method of claim 75, wherein the nematode resistance is *H. glycines* resistance.

77. (Original) The method of claim 76, wherein the *H. glycines* resistance is race 3 *H. glycines* resistance.

78. (Original) The method of claim 71, wherein the construct further comprises another nucleic acid molecule encoding a polypeptide that provides an additional desired characteristic to the plant.

79. (Currently amended) The method of either of claim[[s]] 71 or 78, wherein the method further comprises monitoring an insertion point for the construct in the plant genome; and providing for insertion of the construct into the plant genome at a location not associated with the resistance characteristic, the desired characteristic, or both the resistance and the desired characteristic.

80. (Original) The method of claim 71, wherein the plant is a soybean plant.

81. (Currently amended) An isolated and purified soybean nucleic acid molecule comprising a nucleic acid sequence encoding a soybean disease resistance polypeptide, wherein the disease is one of *Heterodera glycines* infestation and *Fusarium solani* infection, wherein the isolated and purified nucleic acid molecule is selected from the group consisting of:

- (a) an isolated and purified nucleic acid molecule encoding a polypeptide having an amino acid sequence of amino acids 1-610 of SEQ ID NO:14;
- (b) an isolated and purified nucleic acid molecule having a nucleotide sequence set forth as nucleotides 1-1830 of SEQ ID NO:13;
- (c) an isolated and purified nucleic acid molecule having a nucleotide sequence ~~substantially identical~~ at least 90% identical to nucleotides 1-1830 of SEQ ID NO:13; and
- (d) an isolated and purified nucleic acid molecule having a nucleotide sequence that hybridizes to nucleotides 1-1830 of SEQ ID NO:13 under wash stringency conditions represented by a wash solution having about 200 mM salt concentration and a wash temperature of at least about 45°C, and that encodes an SCN/SDS resistance polypeptide.